**Week 21– Rebound Height Experiment**

**Grade:** Grade 9

**Unit:** Linear Relations

**Curriculum Expectations**   
**MPM 1D/ MFM 1P:** Pose problems, identify variables, and formulate hypotheses associated with relationships between two variables  
**SEL:** Make connections between math and everyday contexts to help them make informed judgements and decisions

**Activity**1) Students will conduct an investigation where they drop a ball from various heights and determine the resulting rebound height.  
2) Students will find a ball of their choice and find an open area to complete this activity.  
3) Before starting the investigation students will make a hypothesis of how the height that the ball is dropped from will impact the rebound height, along with the maximum and minimum rebound height of the ball.  
4) After they have made their hypothesis students will complete the investigation and fill in the chart as they go along.  
5) Students may wish to use a measuring tape, ruler, metre stick, etc. or can use nonstandard units of measurement if they don’t have access to a measuring device.   
6) After the investigation students will display their data in a graph.  
Challenge- Try the investigation with a different type of ball. Does the first or second ball go higher? Why do you think that one ball went higher than the other?

**Check for Understanding**   
I can make a hypothesis about the relationship between the rebound height of a ball and the height from which it was dropped.  
I can carry out an investigation to test my hypothesis.  
I can display my findings from the investigation in a graph.

**Materials**   
Recording sheet and graph paper attached below, pencil, measuring device, ball, and an open space

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| Dropped Height | Rebound Height |
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